SHOULD THERE BE A FEDERAL FARM INCOME SAFETY NET?

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Whether there should be a federal farm income safety net, and more precisely what form it should take, are timely questions as Congress prepares to write multi-year legislation to replace the 1996 Federal Agriculture Improvement and Reform (FAIR) Act. For most agriculturalists, the answer to the first question is an obvious and unambiguous affirmative. Others will cite characteristics of modern production, marketing and farm demographics to answer the second question with substantial restraint. The lack of enthusiasm is not about a safety net *per se*, but about what should be the federal government's involvement. There are many opportunities to spread risks and carry income across years in a free society, and government-provided mechanisms are only some of the options. Private consumption smoothing is a touchstone of economic reasoning and is amply supported empirically. Every American farmer has borrowed or saved at one time or another consistent with their perceived lifelong level of income.

So should there be a federal farm income safety net? Calls for expansion of these support programs are widespread. Rather than say simply "yea or nay" there are cautionary flags about various forms of safety nets that merit attention. One caution is against *policy overshooting with cash payment*. Many safety net policies have production-inducing effects that partially offset the payments, and to this extent they provide less relief from low farm prices or incomes than it appears. A second caution is against *reversion to a supply-restricted market-intrusive safety net* provided through acreage or marketing constraints used in conjunction with price supports. This policy combination has for the most part been abandoned, but is still sometimes applied (to sugar, for example) and there are calls for its renewal for other crops. Taking these two different risks into consideration, I conclude by offering one preliminary suggestion about the kind of safety net mechanisms needed for agriculture to have a sound market basis.

Market-Oriented Transition in Farm Policy

American agriculture scarcely resembles the troubled sector of 70 years ago when the average income among six million farmers was less than one-half the national average. Agricultural productivity has improved through technological advances, capital investments and farm consolidation. The modernization of agriculture has allowed the real price of food to fall without impoverishing efficient farmers, and the farm/nonfarm income gap has mostly been eliminated. This itself is evidence of markets working, although interventions undertaken to prop up prices have sometimes idled farm resources and distorted incentives.

Reforms of farm policy have been undertaken as the production of food and employment and income of farmers have undergone dramatic changes. The basic direction of policy reform has been a shift from acreage supply controls combined with price supports above market-clearing levels to less supply intervention and more direct income support, at least for crops that are exported. This policy evolution toward direct payments began in the mid 1960s when price support levels were lowered for corn, wheat

and cotton to enhance U.S. competitiveness, and farmers were offered payments as compensation. A substantial further advance came in the mid 1980s, when price supports set too high in anticipation of inflation and a low-valued dollar that did not materialize were dropped nearly 25 percent, with direct payments once again offered to farmers.

The 1996 FAIR Act marks a third stage in this progression of farm policy away from supply management. The basic features of the FAIR Act are well known—AMTA payments decoupled from prices and planting decisions, planting flexibility, elimination of annual acreage reduction programs (ARPs), and nominal caps on loan rates. These policy moves were accompanied by others that were less reformist: the decoupled payments to farmers were high in 1995-96 even though prices were also high and support programs for dairy, sugar, and peanuts were extended. The FAIR Act did not put farm policy on a new *strategic path* of reform in 1996. As I argue with co-authors Robert Paarlberg and Terry Roe in our recent book Policy Reform in American Agriculture: Analysis and Prognosis (University of Chicago Press, October 1999), crucial changes in farm program instruments were made, but the reform path Congress took in the FAIR Act was the familiar one of a heavily compensated "cash out" of farm programs.

Policy Overshooting

The FAIR Act initially made more federal dollars available to farmers than without a new farm bill and increased rather than decreased the number of farmers receiving government checks. These results were harbingers of things to come. A fiscally-disciplined transition to lower payments was written into the FAIR Act in 1996, and was to accompany deregulation of most production under an optimistic reform scenario. Instead, farm policy has incurred multiple costly additions.

1. *Nominal loan rates have been above market prices, inducing marketing loan payments of billions of dollars ($1.8, $5.9 and $7.6 billion in calendar years 1998, 1999 and 2000, respectively).* Before the FAIR Act, loan rates had been lowered (in the 1985 farm bill) and then adjusted to remain below market-clearing levels, albeit with reliance on annual land idling. Under the FAIR Act, loan rates have been held fixed in nominal terms, first because the legislated caps prevented upward movements when market prices were high, and subsequently when the Secretary of Agriculture exercised discretion not to adjust rates downward based on a moving average of lower prices.

2. *A lot of direct income support*. Under annual appropriations, AMTA payments were increased in 1998 and have been doubled for two years (1999, 2000). Enough income transfers have been made to keep total net cash farm income in 1998-2000 above the 1991-1995 level ($55.1 billion annual average compared to $53.7 billion) even though markets have been signaling a period of lower incomes. Unlike loan rates above market-clearing prices, the primary impact of AMTA payments is not production enhancing, but there are secondary production effects from providing cash fluidity to farmers. Lower levels of payments would have been enough to stabilize farm income with the other policies that were in place.

3. *Increased subsidies for crop and revenue insurance, ad hoc disaster payments, and expansion of commodity coverage*. Premium subsidies for all crop insurance coverage levels have been increased in the Agricultural Risk Protection Act of 2000. Disaster payments and other expenditures authorized in annual appropriations bills have added to the scope and fiscal cost of farm support.

The bidding war over farm policy that has escalated in a closely contested Congress and with emergence of fiscal surpluses has resulted in policy overshooting—the provision of too much support. This is not surprising, since historically farm stabilization policies at home and abroad have tended to stabilize upward. Much of the effect goes into land values, not farm operator income once the land resource is paid its competitive rental value. Payments have increased so much, particularly marketing loan payments, that the United States has (arguably) approached the limit on production-inducing expenditures set under commitments made in the WTO. That limit has begun to enter the farm policy debate, which is a change from the past when WTO commitments were somewhat tangential to discussion of domestic farm policy. There is now a risk that the U.S. commitment to a WTO *ceiling* on distortionary payments may be turned into a floor under such expenditures.

Intended and Unintended Effects of Safety Net Programs

Before the FAIR Act, production-inducing policies were counterbalanced by production-restricting interventions. This form of policy had welfare costs (much of the net loss economists measure from farm programs came from the lost use value of idled land). Under the FAIR Act, these net losses from land idling are avoided, but the U.S. agricultural system is vulnerable to production-expanding policies. Some of the interventions intended to help may be hurting instead, increasing production and retarding adjustments that would restore more profitable (market-derived) equilibrium conditions.

The basic economics of safety nets warrant exposition. Payments-based safety nets to protect farmers from losses come in various forms, from loan rates that protect farmer's returns when market prices fall, to subsidized crop or revenue insurance, to proposals for various counter-cyclical payments linked to some aggregate measure of crop-specific or multiple-crop sectoral income. The safety-net rationale has a common-sense underpinning. In agricultural markets, demand and supply are inelastic (not very price responsive) in the short run, and are subject to relatively large shocks from factors such as weather, exchange rates or cycles in economic growth. This can result in sharp price and income movements without a safety net in place. With a safety net, farmers are spared the full effects of adverse movements in prices and incomes (as illustrated in figure 1 for a hypothetical demand shift and provision of a "safety net price"). So far, so good, but production is kept above its level otherwise when the safety net kicks in, and the market price is pushed downward. Part of the safety net payments that farmers receive from the government simply offset lost market-derived farm income.

Moreover, there is a secondary effect of the safety net on farmers supply decisions. Knowing that they are protected from the lower tail of possible price, yield or income distributions, farmers will shift their supply function, as shown by S_2 compared to S_1 in figure 2. This adds to the available supply when the safety net is operative, putting additional downward pressure on the market price. Notice also that the shift in supply raises output even when market prices are strong enough that the safety net is inoperative. With inelastic demand, this means less gross farm revenue. Farmers receive less market revenue than otherwise because of the safety net every year, but they only receive safety net payment benefits in years when prices are low.

How large are the safety net effects on supply and market-derived farm revenue? Leaving aside the well-known effects among crops, estimates are that current policies (direct payments, insurance subsidies and marketing loans/loan deficiency payments) have expanded 1998-2000 aggregate program crop output from 1.1 to 5.7 percent (see table 1). The aggregate effect may seem modest, but with inelastic demand the expansion of production reduces gross market revenue by $3 to $15 billion in the short run. For loan rates, as much as one-third of payments are offset by lower market receipts. Production costs are incurred with expansion of output, so net revenue is offset more than gross revenue. These are rough

Table 1. Estimated Effects of Safety-Net Policies on 1998-2000 Farm Output (as percentage of total) and Potential Effects of Counter-Cyclical Income Support Payments

Policy	Estimated Effect on Production (1.0 = 1 percent)
Direct (AMTA) Payments	0.15 – 0.25
Crop and Revenue Insurance Subsidies	0.28 – 4.10
Loan Rate Payments	0.68 – 1.38
Total	1.11 – 5.73
Possible Counter-Cyclical Support Payments	?? – ??

Sources: Westcott, Paul and C. Edwin Young, "U.S. Farm Program Benefits: Links to Planting Decisions and Agricultural Market," *Agricultural Outlook*, October 2000: pp. 10-13; Tweeten, Luther, "Impacts of Unilateral Liberalization of Farm Programs," Department of Agricultural, Environmental and Development Economics, Ohio State University, October 2000; Gardner, Bruce, "Agricultural Policy: Pre- and Post-FAIR Act Comparisons," Department of Agricultural and Resource Economics, University of Maryland, October 2000; FAPRI, "The 1-2-3 Scenarios: An Analysis of Safety Net Alternatives," Report 7-00, July 2000; and FAPRI, "Preliminary Assessment of Counter-Cyclical Payments Options," November 2000.

calculations, but make a point. It does not take too much production enhancement to reduce the market-derived income of farmers. This is a vicious not virtuous cycle. The lower income then generates calls for more help in the form of income transfers.

The newest proposals for a safety net involve counter-cyclical payments triggered by downturns in market-derived income. Several variants of these proposals are in circulation: with payments depending alternatively on local (county or state) or national income levels, related to single-crop or multiple-crop gross or net revenue, using a fixed base period or a moving average of past revenue levels. The basic idea is that such counter-cyclical payments would insulate farmers from a wide variety of adverse shocks, and lessen the enticement for Congress to act on an ad hoc basis.

Counter-cyclical payments might avoid some of the hazards associated with insurance policies based on individual farm yields, but the effects of these various proposals have not been fully sorted out. A FAPRI study (July 2000, cited above) suggests that the production-inducing effects of new counter-cyclical payments is equivalent to that of traditional loan rates. For a fixed $10 billion fiscal expenditure, this study with production effects taken into account finds that net farm income rises on average $7.4 and $7.8 billion, respectively, under crop-specific counter-cyclical income payments versus higher loan guarantees. Again, about 25 percent of the direct payments are offset by lower market income.

Traditional Market Interventions

Farm bills have been slow to secure reforms for those commodities that receive border protection. These traditional programs offer a rigid type of farm income safety net: a relatively high price guarantee enforced with supply controls. There is a limit to the use of this policy option and it is not a direction in which policies for other crops should revert.

Recent stress on the U.S. sugar program illustrates this point. Until 2000, domestic prices for sugar were maintained above levels of loan rates (and well above world price levels) without crop forfeitures, mostly by squeezing down imports that exceeded the U.S. minimum international market-access commitments under NAFTA and the WTO. In 2000, domestic supply increased relative to demand putting downward pressure on prices, even with imports at the lowest levels the international agreements would permit. In response, a partial plow-down of the sugar-beet crop was announced and USDA took possession of nearly 1 million tons of sugar to prop up prices, showing vividly the net losses implied by the sugar program. More such waste is in the offing if the sugar program is not changed. The United States is committed to access of additional sugar imports from Mexico by 2008 under forward-looking NAFTA provisions designed to eliminate the agricultural trade barriers between the two countries.

An unattractive option for sugar policy is to hold up the level of U.S. prices by maintaining current loan rates and increasing constraints on domestic supply if necessary. Stocks can be accumulated, and if that is not enough crops can be plowed down in the field, or marketing allotments or acreage restrictions can be re-legislated, or paid land diversions can be adopted. These are the types of government storage and supply-control measures that Congress has progressively moved away from for other crops.

A better approach to sugar policy would progressively convert the sugar program to direct payments. This policy change would reduce government entanglement in the sugar market, provide more price flexibility in the short run, and facilitate multilateral international trade policy reform that includes sugar in the long run. As a first move in this direction, Congress could adopt marketing loans that would free up sugar prices on the consumption side, while retaining current price guarantees to producers. A more fully decoupled option is to implement fixed direct payments and lower loan rates. Either step would move sugar policy down the reform path taken for other field crops since the mid 1960s.

New Feedback Mechanisms for Safety Net Design

The current challenge for much of farm policy is how to make further moves toward market orientation attractive while avoiding the worst overshooting effects inherent in unconstrained provision of a safety net based on direct payments. These overshooting effects will not be avoided unless Congress writes some restraint into policy rules. There are suggestions to build co-responsibility of farmers into policy while providing support by linking payments to provision of environmental benefits. Here, I focus on another approach—a safety net that restores an element of free choice to farm decision makers, while offering them some government aid.

A longstanding criticism of farm policy is that the distribution of program payments is primarily to the largest producers and regularly there are calls to limit such payments. These calls for size-related policy targeting have not been well received—recently the Commission on 21st Century Production Agriculture rejects this approach outright. Today's farm policy is not anti-poverty policy as much as it is industrial policy. Yet there is a concept from federal welfare reform, that of setting limits on individual eligibility, that may prove constructive for farm policy design as well.

Instead of targeting farm support with payment limitations, why not limit the number of years any one farmer (regardless of size of operation) can choose to draw on government support, such as AMTA or loan-deficiency payments? The idea is that a farmer would have this federally-provided tool for income smoothing, and could chose when to utilize it, but would not be able to anticipate being forever "on the dole." Perhaps the limit that a farmer could draw support in any five years of his or her choice over a lifetime of farming would be appropriate. An older farmer who had exercised this option and was ready

to retire could be bought out at a premium by a new entrant to farming since the new person would start off with renewed support eligibility.

If per-farmer eligibility constraints prove too difficult to apply, then a safety net option could be tied to base acres instead of persons. An advantage of this latter approach would be that the value of the safety net entitlement built into the price of land would decline as the support option was exercised. This would make it easier for a new farmer to begin operations with an asset base from which the government support value had been depreciated over time. Alternatively, a land owner could choose not to exercise the safety net option, and receive compensation for that choice when the land changed hands. Over a generation or two, farm asset values would come to rest on market-based determinants.

These suggestions for a new approach to a farm safety net are preliminary and need to be thought through carefully along with others. Some new mechanisms are needed to provide feedback constraints to safety net policy based on cash payments.

Conclusion

I have highlighted several cautionary points to guide provision of a farm income safety net. The long slow policy evolution for most crops away from supply-control market interventions should not be reversed. Yet post-FAIR farm policy is vulnerable to overshooting. Too much support is likely to be offered and policies that are adopted will elicit more output than markets otherwise call forth. With inelastic demand in the short run, this creates a policy-induced reduction of market-derived farm revenue, offsetting some of the safety net payments and leading to additional calls for income support. New mechanisms need to be investigated to put some bounds on eligibility for farm safety net programs. There is also need for reform of remaining interventions that rely on supply controls to raise market prices, such as for sugar. This program proved costly in 2000 and runs counter to U.S. interest in an open global trading system.

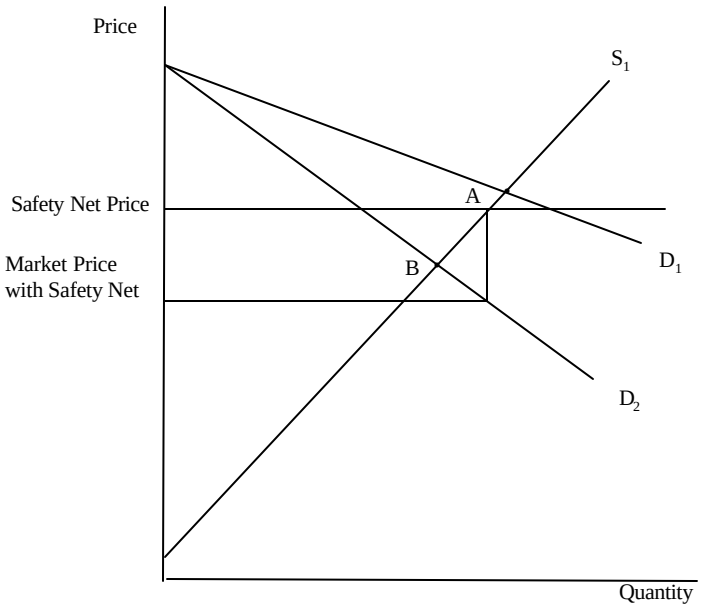

Figure 1. A Safety Net at Work

With a safety net in place, farmers are spared the full effects of a collapse of demand from D_1 to D_2. Instead of the market equilibrium moving from A to B, farmers receive the "Safety Net Price" while consumers pay the "Market Price with Safety Net."

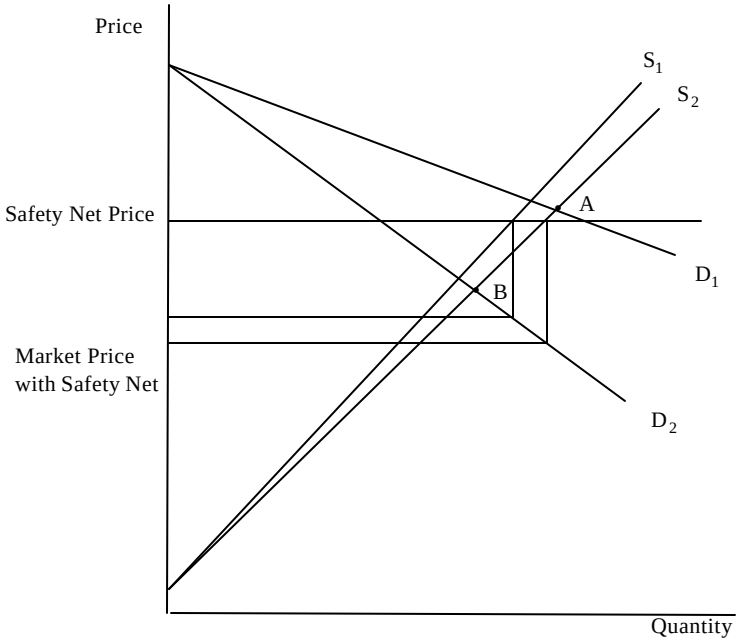

Figure 2. Secondary Effects from Provision of a Safety Net

By eliminating the risk of receiving the lowest prices, a safety net induces farmers to shift supply from S_1 to S_2. This drives the price consumers pay down further when the safety net is operative. The supply shift also causes a lower market price at A when the safety net is not operative.